

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/582,301  
Source: JFWP  
Date Processed by STIC: 06/21/2006

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IFWP

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/582,301

DATE: 06/21/2006

TIME: 11:04:46

Input Set : A:\PTO.KD.txt

Output Set: N:\CRF4\06212006\J582301.raw

3 <110> APPLICANT: AGENCY FOR SCIENCE TECHNOLOGY AND RESEARCH  
 5 <120> TITLE OF INVENTION: SARS CORONAVIRUS S PROTEINS AND USES THEREOF  
 7 <130> FILE REFERENCE: 5463-2PCT  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/582,301  
 C--> 10 <141> CURRENT FILING DATE: 2006-06-09  
 12 <150> PRIOR APPLICATION NUMBER: 60/528,596  
 13 <151> PRIOR FILING DATE: 2003-12-10  
 15 <160> NUMBER OF SEQ ID NOS: 25  
 17 <170> SOFTWARE: PatentIn Ver. 3.3  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 3765  
 21 <212> TYPE: DNA  
 22 <213> ORGANISM: SARS Coronavirus  
 24 <400> SEQUENCE: 1  
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 27 tactatcccg atgaaatttt tagatcagac actctttatt taactcagga tttatctttt 180  
 28 ccattttattt ctaatgttac agggtttcat actattaatc atacgtttgg caaccctgtc 240  
 29 atacccctta aggatggat ttattttgc gcccacagaga aatcaaatgt tgtccgtgg 300  
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 32 tctaaaccca tgggtacaca gacacatact atgatattcg ataatgcatt taattgcact 480  
 33 ttcgagtaca tatctgatgc ctttcgctt gatgtttcag aaaagtccagg taattttaaa 540  
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 35 caaccatatag atgtatgtcg tgatctacct tctgggttttta acactttgaa acctatttttt 660  
 36 aagttgcctc ttggatttttta cattacaaat tttagagcca ttcttacagc ctttcacct 720  
 37 gctcaagaca ttggggcac gtcagctgca gccttatttttgg tggcgattt aaagccaaact 780  
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 40 cagacctcta atttcagggt tggtccctca ggagatgttgc tgagattccc taatattaca 960  
 41 aacttgcgtc ctgtttggaga ggtttttaat gctactaaat tcccttctgt ctatgcattgg 1020  
 42 gagagaaaaaa aaatttctaa ttgtgttgc gattactctg tgctctacaa ctcaacagtt 1080  
 43 ttgttcaaccc ttaagtgcata tggcggttctt gccactaagt tgaatgatct ttgcttctcc 1140  
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56 atatattcta ctggaaacaa tgtattccag actcaagcag gctgtcttat aggagctgag 1920
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91 <211> LENGTH: 1255
92 <212> TYPE: PRT
93 <213> ORGANISM: SARS Coronavirus
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99 Asp Arg Cys Thr Thr Phe Asp Asp Val Gln Ala Pro Asn Tyr Thr Gln
100 20 25 30
102 His Thr Ser Ser Met Arg Gly Val Tyr Tyr Pro Asp Glu Ile Phe Arg
103 35 40 45
105 Ser Asp Thr Leu Tyr Leu Thr Gln Asp Leu Ser Leu Pro Phe Tyr Ser
106 50 55 60
108 Asn Val Thr Gly Phe His Thr Ile Asn His Thr Phe Gly Asn Pro Val
109 65 70 75 80

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115                      100                 105                 110
117 Ser Val Ile Ile Asn Asn Ser Thr Asn Val Val Ile Arg Ala Cys
118                      115                 120                 125
120 Asn Phe Glu Leu Cys Asp Asn Pro Phe Phe Ala Val Ser Lys Pro Met
121                      130                 135                 140
123 Gly Thr Gln Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr
124 145                      150                 155                 160
126 Phe Glu Tyr Ile Ser Asp Ala Phe Ser Leu Asp Val Ser Glu Lys Ser
127                      165                 170                 175
129 Gly Asn Phe Lys His Leu Arg Glu Phe Val Phe Lys Asn Lys Asp Gly
130                      180                 185                 190
132 Phe Leu Tyr Val Tyr Lys Gly Tyr Gln Pro Ile Asp Val Val Arg Asp
133                      195                 200                 205
135 Leu Pro Ser Gly Phe Asn Thr Leu Lys Pro Ile Phe Lys Leu Pro Leu
136                      210                 215                 220
138 Gly Ile Asn Ile Thr Asn Phe Arg Ala Ile Leu Thr Ala Phe Ser Pro
139 225                      230                 235                 240
141 Ala Gln Asp Ile Trp Gly Thr Ser Ala Ala Ala Tyr Phe Val Gly Asp
142                      245                 250                 255
144 Leu Lys Pro Thr Thr Phe Met Leu Lys Tyr Asp Glu Asn Gly Thr Ile
145                      260                 265                 270
147 Thr Asp Ala Val Asp Cys Ser Gln Asn Pro Leu Ala Glu Leu Lys Cys
148                      275                 280                 285
150 Ser Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr Ser Asn
151                      290                 295                 300
153 Phe Arg Val Val Pro Ser Gly Asp Val Val Arg Phe Pro Asn Ile Thr
154 305                      310                 315                 320
156 Asn Leu Cys Pro Phe Gly Glu Val Phe Asn Ala Thr Lys Phe Pro Ser
157                      325                 330                 335
159 Val Tyr Ala Trp Glu Arg Lys Lys Ile Ser Asn Cys Val Ala Asp Tyr
160                      340                 345                 350
162 Ser Val Leu Tyr Asn Ser Thr Val Phe Ser Thr Phe Lys Cys Tyr Gly
163                      355                 360                 365
165 Val Ser Ala Thr Lys Leu Asn Asp Leu Cys Phe Ser Asn Val Tyr Ala
166                      370                 375                 380
168 Asp Ser Phe Val Val Lys Gly Asp Asp Val Arg Gln Ile Ala Pro Gly
169 385                      390                 395                 400
171 Gln Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys Leu Pro Asp Asp Phe
172                      405                 410                 415
174 Met Gly Cys Val Leu Ala Trp Asn Thr Arg Asn Ile Asp Ala Thr Ser
175                      420                 425                 430
177 Thr Gly Asn Tyr Asn Tyr Lys Tyr Arg Tyr Leu Arg His Gly Lys Leu
178                      435                 440                 445
180 Arg Pro Phe Glu Arg Asp Ile Ser Asn Val Pro Phe Ser Pro Asp Gly
181                      450                 455                 460
183 Lys Pro Cys Thr Pro Pro Ala Leu Asn Cys Tyr Trp Pro Leu Asn Asp

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184	465	470	475	480
186	Tyr Gly Phe Tyr Thr Thr Gly Ile Gly Tyr Gln Pro Tyr Arg Val			
187	485	490	495	
189	Val Val Leu Ser Phe Glu Leu Leu Asn Ala Pro Ala Thr Val Cys Gly			
190	500	505	510	
192	Pro Lys Leu Ser Thr Asp Leu Ile Lys Asn Gln Cys Val Asn Phe Asn			
193	515	520	525	
195	Phe Asn Gly Leu Thr Gly Thr Gly Val Leu Thr Pro Ser Ser Lys Arg			
196	530	535	540	
198	Phe Gln Pro Phe Gln Gln Phe Gly Arg Asp Val Ser Asp Phe Thr Asp			
199	545	550	555	560
201	Ser Val Arg Asp Pro Lys Thr Ser Glu Ile Leu Asp Ile Ser Pro Cys			
202	565	570	575	
204	Ser Phe Gly Gly Val Ser Val Ile Thr Pro Gly Thr Asn Ala Ser Ser			
205	580	585	590	
207	Glu Val Ala Val Leu Tyr Gln Asp Val Asn Cys Thr Asp Val Ser Thr			
208	595	600	605	
210	Ala Ile His Ala Asp Gln Leu Thr Pro Ala Trp Arg Ile Tyr Ser Thr			
211	610	615	620	
213	Gly Asn Asn Val Phe Gln Thr Gln Ala Gly Cys Leu Ile Gly Ala Glu			
214	625	630	635	640
216	His Val Asp Thr Ser Tyr Glu Cys Asp Ile Pro Ile Gly Ala Gly Ile			
217	645	650	655	
219	Cys Ala Ser Tyr His Thr Val Ser Leu Leu Arg Ser Thr Ser Gln Lys			
220	660	665	670	
222	Ser Ile Val Ala Tyr Thr Met Ser Leu Gly Ala Asp Ser Ser Ile Ala			
223	675	680	685	
225	Tyr Ser Asn Asn Thr Ile Ala Ile Pro Thr Asn Phe Ser Ile Ser Ile			
226	690	695	700	
228	Thr Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser Val Asp Cys			
229	705	710	715	720
231	Asn Met Tyr Ile Cys Gly Asp Ser Thr Glu Cys Ala Asn Leu Leu Leu			
232	725	730	735	
234	Gln Tyr Gly Ser Phe Cys Thr Gln Leu Asn Arg Ala Leu Ser Gly Ile			
235	740	745	750	
237	Ala Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys			
238	755	760	765	
240	Gln Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe			
241	770	775	780	
243	Ser Gln Ile Leu Pro Asp Pro Leu Lys Pro Thr Lys Arg Ser Phe Ile			
244	785	790	795	800
246	Glu Asp Leu Leu Phe Asn Lys Val Thr Leu Ala Asp Ala Gly Phe Met			
247	805	810	815	
249	Lys Gln Tyr Gly Glu Cys Leu Gly Asp Ile Asn Ala Arg Asp Leu Ile			
250	820	825	830	
252	Cys Ala Gln Lys Phe Asn Gly Leu Thr Val Leu Pro Pro Leu Leu Thr			
253	835	840	845	
255	Asp Asp Met Ile Ala Ala Tyr Thr Ala Ala Leu Val Ser Gly Thr Ala			
256	850	855	860	

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261 Ala Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn  
262 885 890 895  
264 Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala  
265 900 905 910  
267 Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Ser Thr Ala Leu Gly  
268 915 920 925  
270 Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu  
271 930 935 940  
273 Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn  
274 945 950 955 960  
276 Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp  
277 965 970 975  
279 Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln  
280 980 985 990  
282 Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala  
283 995 1000 1005  
285 Thr Lys Met Ser Glu Cys Val Leu Gly Gln Ser Lys Arg Val Asp Phe  
286 1010 1015 1020  
288 Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala Pro His  
289 1025 1030 1035 1040  
291 Gly Val Val Phe Leu His Val Thr Tyr Ala Pro Ser Gln Glu Arg Asn  
292 1045 1050 1055  
294 Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys Ala Tyr Phe Pro  
295 1060 1065 1070  
297 Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser Trp Phe Ile Thr Gln  
298 1075 1080 1085  
300 Arg Asn Phe Phe Ser Pro Gln Ile Ile Thr Thr Asp Asn Thr Phe Val  
301 1090 1095 1100  
303 Ser Gly Asn Cys Asp Val Val Ile Gly Ile Ile Asn Asn Thr Val Tyr  
304 1105 1110 1115 1120  
306 Asp Pro Leu Gln Pro Glu Leu Asp Ser Phe Lys Glu Glu Leu Asp Lys  
307 1125 1130 1135  
309 Tyr Phe Lys Asn His Thr Ser Pro Asp Val Asp Leu Gly Asp Ile Ser  
310 1140 1145 1150  
312 Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu  
313 1155 1160 1165  
315 Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu  
316 1170 1175 1180  
318 Leu Gly Lys Tyr Glu Gln Tyr Ile Lys Trp Pro Trp Tyr Val Trp Leu  
319 1185 1190 1195 1200  
321 Gly Phe Ile Ala Gly Leu Ile Ala Ile Val Met Val Thr Ile Leu Leu  
322 1205 1210 1215  
324 Cys Cys Met Thr Ser Cys Cys Ser Cys Leu Lys Gly Ala Cys Ser Cys  
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L:9 M:270 C: Current Application Number differs, Replaced Current Application Number

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date